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FETF: 81605

In the Claims:

1 (previously presented): A method for making a flip chip ball grid array package comprising the following steps:

reducing the thickness of a die from a wafer thickness to a selected thickness to make a thin die for reducing mismatch of a coefficient of thermal expansion of the thin die to that of a substrate;

forming a plurality of thin film layers on the thin die wherein each of the thin film layers has a coefficient of thermal expansion that is greater than that of the thin die and is less than that of the substrate; and

forming a plurality of wafer bumps on the thin die to make electrical contact between the thin die and the substrate.

2 (previously presented): The method of Claim 1 wherein the die thickness is less than 500 microns.

3 (previously presented): The method of Claim 1 wherein at least one of the plurality of thin film layers comprises an adhesive.

4 (currently amended): A method for making a flip chip ball grid array package comprising the following steps:

reducing the thickness of a die from a wafer thickness to a selected thickness to make a thin die for reducing mismatch of a coefficient of thermal expansion of the thin die to that of a substrate;

forming a plurality of thin film layers on the thin die wherein each of the thin film layers has a coefficient of

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thermal expansion that is greater than that of the thin die
and is less than that of the substrate; and

forming a plurality of wafer bumps on the thin die to
make electrical contact between the thin die and the substrate

~~The method of Claim 1~~ wherein the plurality of thin film layers comprises a first, a second, and a third thin film layer having successively graduated coefficients of thermal expansion from about 7-10 parts per million per degree Kelvin for the first thin film layer, 10-14 parts per million per degree Kelvin for the second thin film layer, and 15-19 parts per million per degree Kelvin for the third thin film layer, respectively.

5 (previously presented): The method of Claim 1 further including the step of underfilling between the thin die and the substrate.

6 (previously presented): A method for making a flip chip ball grid array package comprising the following steps:

reducing the thickness of a die from a wafer thickness to a selected thickness to make a thin die for reducing mismatch of a coefficient of thermal expansion of the thin die to that of a substrate;

forming a plurality of thin film layers on the thin die wherein each of the thin film layers has a coefficient of thermal expansion that is greater than that of the thin die and is less than that of the substrate; and

bonding the thin die to the substrate to make electrical contact between the plurality of wafer bumps on the thin die and a plurality of contact pads on the substrate.

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7 (previously presented): The method of Claim 6 wherein the die thickness is less than 500 microns.

8 (previously presented): The method of Claim 6 wherein at least one of the plurality of thin film layers comprises an adhesive.

9 (currently amended): A method for making a flip chip ball grid array package comprising the following steps:
reducing the thickness of a die from a wafer thickness to a selected thickness to make a thin die for reducing mismatch of a coefficient of thermal expansion of the thin die to that of a substrate;

forming a plurality of thin film layers on the thin die wherein each of the thin film layers has a coefficient of thermal expansion that is greater than that of the thin die and is less than that of the substrate; and

bonding the thin die to the substrate to make electrical contact between the plurality of wafer bumps on the thin die and a plurality of contact pads on the substrate ~~The method of Claim 6~~ wherein the plurality of thin film layers comprises a first, a second, and a third thin film layer having successively graduated coefficients of thermal expansion from about 7-10 parts per million per degree Kelvin for the first thin film layer, 10-14 parts per million per degree Kelvin for the second thin film layer, and 15-19 parts per million per degree Kelvin for the third thin film layer, respectively.